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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,832	08/02/2001	Shunpei Yamazaki	12732-063001/US5165	4335

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EXAMINER

FATAHI YAR, MAHMOUD

ART UNIT PAPER NUMBER

2674

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/919,832

Applicant(s)

YAMAZAKI ET AL.

Examiner

Mike Fatahiyar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-94 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-5, 8-13, 27-29, 31-33, 35-37, 40-45, 47-49, 52-57, 60-62 and 65-70 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 14-25, 34, 46, 58-59 and 71-94 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 26, 30, 38, 39, 50, 51, 63 and 64 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5, 8, 9 and 10.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The missing drawings related to figures 35-37 were received on 8/20/01. These drawings are accepted.
2. The drawings are objected to because in figures 1-37, there are boxes shown which are not standard electronic symbols. These boxes require descriptive labels. Also, conventional figures 13-16, 29A and 29B as specified in pages 1-7 of the specification, should be labeled as "Prior Art". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 23, 88 and 93 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 23, line 3, "PRAM" should be – FRAM--. Correction and/or clarification is required.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 16-22, 25, 59, 71-76 and 88-94 are rejected under 35 U.S.C. 102(b) as being anticipated by Okumura et al(5,945,972).

Okumura et al disclose a method and apparatus for a portable information device such as a PDA, cellular phone, electronic notebook, PDA etc.(column 2, lines 15-21) having an electroluminescence display device(column 28, lines 5-11) comprising a plurality of pixels(i.e., the cells) wherein each of the plurality of pixels having n memory circuits(121, figure 5), a D/A converter(534, figure 27); a CPU(508); a first circuit(504-505, 511-512) and a second circuit(506-507) which all function as claimed.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 14, 23, 34 and 77-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura et al(5,945,972).

Okumura et al is discussed above. In the above claims, as to the noted limitations " the memory circuit is a memory selected from the group consisting of SRAM, FRAM and DRAM", it is noted that Okumura et al teach that the memory circuits(230) in each of the pixels are made of a DRAM or a SRAM(column 18, lines 18-42). While Okumura et al does not disclose the use of FRAM as the memory device for each pixel but the use of such memory device for retaining pixel information temporary is well within the purview of one of ordinary skill in the art because they are alternative equivalent of each other for the purpose of storing display information for the pixels temporary until the pixels are refreshed again. Thus, it would have been obvious to one of ordinary skill in the art to modify the system of Okumura et al such that to select the memory circuits(121 or 230) for each pixels fro a group consisting of a SRAM, FRAM and DRAM for the reasons outlined above.

9. Claims 15, 24, 46, 58 and 82-87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okumura et al in view of Sato et al(5,712,652).

Okumura et al is discussed above. Sato et al is cited to show that the concept of utilizing memory circuits in each pixel formed on a substrate selected from a group consisting of a glass substrate, a plastic substrate, a stainless substrate and a single crystal wafer is old(column 9, lines 28-67; column 10, lines 1-67 and column 19, lines 1-50). Thus, it would have been obvious to one of ordinary skill in the art to modify the

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memory devices(121, 230) of each pixel in the system of Okumura et al such that they are formed on a substrate selected from a group consisting from a glass substrate, a plastic substrate, a stainless substrate and a single crystal wafer, as evidenced by Sato et al, because both references are related to a matrix display device wherein each pixel has a plurality of memories and further because the noted substrates are alternative equivalent of each other and the use of any of them as a substrate for formation a memory circuit is considered to be conventional is matrix display devices.

10. Claims 3-5, 8-13, 27-29, 31-33, 35-37, 40-45, 47-49, 52-57, 60-62 and 65-67 are allowed.

11. Claims 6, 7, 26, 30, 38, 39, 50, 51, 63 and 64 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Koyama, Sato et al('267B1), Taguchi et al, Nakamura, Ishii, Yamaguchi and Katayama et al are made of record to show various types of matrix display devices wherein each pixels has a plurality of memory devices.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Mike Fatahiyar** whose telephone number is **(703) 305-6911**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

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Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:


(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

M. Fatahiyar *MF*

September 6, 2004


RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600
9/7/04